

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for ALPHA-THUJENE

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Origanum vulgare</i>	Shoot		315.0	5.123194651318674	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. Z. Lebensm Unters Forsch 197: 20-23.
<i>Satureja thymbra</i>	Shoot		295.0	4.762551907216386	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. Z. Lebensm Unters Forsch 197: 20-23.
<i>Artemisia annua</i>	Plant		6500.0	3.4068336142288143	--
<i>Salvia officinalis</i>	Leaf	0.0	386.0	3.2507273876024785	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
<i>Boswellia serrata</i>	Essential Oil		500000.0	2.8262426673204106	--
<i>Eucalyptus moluccana</i>	Shoot		170.0	2.5085347565770877	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
<i>Elettaria cardamomum</i>	Fruit	1330.0	3047.0	2.2243250322627803	Duke, J. A. and duCellier, J. L. 1993. CRC Handbook of Alternative Cash Crops. CRC Press. Boca Raton, FL 33431. 536 pp. US \$312.50.
<i>Piper cubeba</i>	Fruit Essent. Oil	120000.0	130000.0	1.694415544579461	--
<i>Thymus riatarum</i>	Shoot		120.0	1.606927896321368	Iglesias, J., Vila, R., Canigueral, S., Bellakdhar, and II Idrissi, A. 1991. Analysis of the Essential Oil of Thymus riatarum. J. Ess. Oil Res. 3: 43-4.
<i>Piper cubeba</i>	Fruit	1100.0	2200.0	1.4401949119825743	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Eucalyptus camaldulensis</i>	Shoot		110.0	1.426606524270224	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
<i>Melaleuca alternifolia</i>	Root Essent. Oil		133000.0	1.4120805090287523	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Melaleuca linariifolia</i>	Leaf	150.0	200.0	1.3864103732522657	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
<i>Anethum graveolens</i>	Leaf Essent. Oil		33400.0	1.3792500393171634	--
<i>Eucalyptus dealbata</i>	Shoot		105.0	1.336445838244652	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Elettaria cardamomum</i>	Plant	1330.0	3047.0	1.2969582121204046	--
<i>Petroselinum crispum</i>	Seed	4.0	490.0	1.2676723818974631	--
<i>Rosmarinus officinalis</i>	Shoot	37.0	90.0	1.065963780167936	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. <i>J. Ess. Oil Res.</i> 5: 243-246.
<i>Boswellia sacra</i>	Resin, Exudate, Sap		192300.0	1.0	Chiavari, G., Gtalletti, G. C., Piccaglia, R., Mohamud, M. A. 1991. Differentiation Between Resins <i>Boswellia carterii</i> and <i>Boswellia frereana</i> (Frankincense) of Somali Origin. <i>J. Essent. Oil Res.</i> 3 (3):185-186.
<i>Myristica fragrans</i>	Seed Essent. Oil		30000.0	1.0	--
<i>Sideritis mugronensis</i>	Flower	35.0	45.0	1.0	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of <i>Sideritis mugronensis</i> Flower and Leaf. <i>J. Ess. Oil Res.</i> , 3: 395-397.
<i>Monarda fistulosa</i>	Plant	3.0	2480.0	0.9505060392285806	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Origanum vulgare</i>	Shoot Essent. Oil		11200.0	0.7911582080686764	--
<i>Anethum graveolens</i>	Shoot Essent. Oil		10600.0	0.6195817292104092	--
<i>Thymus funkii</i>	Shoot		65.0	0.6151603500400763	Vila, R., et al. 1995. Composition and study of the variability of the essential oil of <i>Thymus funkii</i> Cousson. <i>Flav. & Fragr. J.</i> 10(6): 379-383.
<i>Thymus funkii</i>	Shoot		65.0	0.6151603500400763	Vila, R., et al. 1995. Composition and study of the variability of the essential oil of <i>Thymus funkii</i> Cousson. <i>Flav. & Fragr. J.</i> 10(6): 379-383.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Hyssopus officinalis	Shoot		60.0	0.524999640145044	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
Rosmarinus eriocalyx	Shoot	33.0	52.0	0.38074256637358916	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
Rosmarinus eriocalyx	Shoot	33.0	52.0	0.38074256637358916	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
Eucalyptus polyanthemos	Shoot		50.0	0.3446782919633604	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Hyssopus officinalis	Shoot		50.0	0.3446782919633604	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
Rosmarinus officinalis	Shoot	12.0	50.0	0.3446782919633604	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
Eucalyptus sideroxylon	Shoot		40.0	0.16435691991221646	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Melaleuca alternifolia	Leaf		76.0	0.14353236368545716	--
Origanum majorana	Plant	15.0	1100.0	0.10728911049715678	--
Trichostemma dichotomum	Shoot		35.0	0.0741962338866445	Tucker, A.O. and Maciarelllo, M.J. 1990. The Essential Oil of <i>Trichostemma dichotomum</i> . J. Ess. Oil Res. 2: 149-150.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus oviformis	Shoot		35.0	0.0741962338866445	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Origanum onites	Shoot		33.0	0.03813195947641571	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. Z. Lebensm Unters Forsch 197: 20-23.
Satureja obovata	Leaf		65.0	0.03327705638517577	Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of Satureja obovata. Phytochemistry 35(1): 83.
Satureja obovata	Leaf		65.0	0.03327705638517577	Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of Satureja obovata. Phytochemistry 35(1): 83.
Pycnanthemum montanum	Shoot	28.0	32.0	0.02009982227130132	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Hyssopus officinalis	Shoot		30.0	-0.015964452138927467	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (Hyssopus officinalis L.) J. Agric. Food Chem. 42: 776-781.
Hyssopus officinalis	Shoot		30.0	-0.015964452138927467	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (Hyssopus officinalis L.) J. Agric. Food Chem. 42: 776-781.
Hyssopus officinalis	Shoot		30.0	-0.015964452138927467	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (Hyssopus officinalis L.) J. Agric. Food Chem. 42: 776-781.
Hyssopus officinalis	Shoot		30.0	-0.015964452138927467	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (Hyssopus officinalis L.) J. Agric. Food Chem. 42: 776-781.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Rosmarinus tomentosus</i>	Shoot	16.0	30.0	-0.015964452138927467	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. <i>J. Ess. Oil Res.</i> 5: 243-246.
<i>Rosmarinus x lavandulaceus</i>	Shoot	0.1	30.0	-0.015964452138927467	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. <i>J. Ess. Oil Res.</i> 5: 243-246.
<i>Anethum graveolens</i>	Seed	36.0	231.0	-0.09092270877057655	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Monarda punctata</i>	Plant	220.0	720.0	-0.12490105828395985	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Rosmarinus x mendizabalii</i>	Shoot	0.1	22.0	-0.1602215497798426	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. <i>J. Ess. Oil Res.</i> 5: 243-246.
<i>Coridotherymus capitatus</i>	Shoot		22.0	-0.1602215497798426	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. <i>Z. Lebensm Unters Forsch</i> 197: 20-23.
<i>Hyptis suaveolens</i>	Shoot		21.0	-0.178253686984957	Mallavarapu, G.R., Ramesh, S., Kaul, P.N., Bhattacharya, A.K., and Rao, B.R.R. 1993. The Essential Oil of <i>Hyptis suaveolens</i> (L.) Poit. <i>J. Ess. Oil Res.</i> 5: 321.
<i>Hyptis suaveolens</i>	Shoot		21.0	-0.178253686984957	Mallavarapu, G.R., Ramesh, S., Kaul, P.N., Bhattacharya, A.K., and Rao, B.R.R. 1993. The Essential Oil of <i>Hyptis suaveolens</i> (L.) Poit. <i>J. Ess. Oil Res.</i> 5: 321.
<i>Hyssopus officinalis</i>	Shoot		20.0	-0.1962858241900714	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.). <i>J. Agric. Food Chem.</i> 42: 776-781.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Hyssopus officinalis	Shoot		20.0	-0.1962858241900714	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) <i>J. Agric. Food Chem.</i> 42: 776-781.
Piper nigrum	Fruit Essent. Oil	7300.0	29000.0	-0.22630241280017493	--
Myrtus communis	Shoot	2.0	18.0	-0.23235009860030018	--
Brassica oleracea var. capitata l.	Shoot		18.0	-0.23235009860030018	--
Murraya koenigii	Leaf		37.0	-0.24737281674281325	--
Rosmarinus officinalis	Plant	1.0	475.0	-0.274602614471785	--
Origanum majorana	Essential Oil		19000.0	-0.27796616080745823	--
Chrysanthemum parthenium	Shoot		15.0	-0.2864465102156434	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of <i>Tanacetum parthenium</i> (L.) Schultz-Bip. <i>Flavor and Fragrance Journal</i> 11(6): 367-71.
Micromeria varia	Shoot		15.0	-0.2864465102156434	Pedro, L.G., et al. 1995. Composition of the Essential oil of <i>Micromeria varia</i> Benth. ssp. <i>thymoides</i> (<i>Sol. ex Lowe</i>) Perez var. <i>thymoides</i> , and endemic species of the Madeira Archipelago. <i>flav. & Fragr. J.</i> 10(3): 199-202.
Micromeria varia	Shoot		15.0	-0.2864465102156434	--
Tanacetum parthenium	Shoot		15.0	-0.2864465102156434	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of <i>Tanacetum parthenium</i> (L.) Schultz-Bip. <i>Flavor and Fragrance Journal</i> 11(6): 367-71.
Ocimum gratissimum	Plant	50.0	445.0	-0.29293341727029426	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Melaleuca alternifolia	Essential Oil	4400.0	15000.0	-0.303780787236796	--
Daucus carota	Shoot		12.0	-0.34054292183098656	--
Thymus vulgaris	Essential Oil		9200.0	-0.3412119955593358	--
Satureja montana	Essential Oil		7400.0	-0.3528285774525378	--
Tanacetum parthenium	Essential Oil		6000.0	-0.36186369670280605	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Anethum graveolens	Leaf	10.0	25.0	-0.3676513337976657	--
Juniperus communis	Fruit	24.0	240.0	-0.37432106883112565	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Satureja cuneifolia	Shoot		10.0	-0.3766071962412153	Tumen, G. 1991. The Volatile Constituents of Satureja cuneifolia. J. Ess. Oil Res., 3: 365-366.
Sideritis pauli	Shoot		10.0	-0.3766071962412153	Burzaco, A., Velasco-Negueruela, A. and Perez-Alonso, M.J. 1992. Essential Oil Analysis of Sideritis pauli Pau. FFJ7: 47-8. 1992.
Eucalyptus cladocalyx	Shoot		10.0	-0.3766071962412153	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Thymus serpyllum	Plant	15.0	306.0	-0.3778661369033869	--
Satureja montana	Plant	5.0	300.0	-0.38153229746308875	--
Anethum graveolens	Fruit	36.0	231.0	-0.3826530299675151	--
Salvia officinalis	Essential Oil		1200.0	-0.3928412484180114	--
Tagetes minuta	Essential Oil		800.0	-0.3954227110609452	--
Citrus limon	Essential Oil	16.0	40.0	-0.40032749008251933	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pimenta dioica	Leaf		20.0	-0.4177673825705209	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Salvia officinalis	Leaf Essent. Oil		13800.0	-0.41897395872827414	--
Cinnamomum verum	Leaf		19.0	-0.42779059232509187	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
Micromeria fruticosa	Shoot		7.0	-0.43070360785655853	Fleisher, Z. and Fleisher, A. 1991. The Essential Oil of Micromeria fruticosa (L.) Druce subsp. barbata (Boiss et. Ky.), P.H. Davis. Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res 3: 477-479.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Micromeria fruticosa</i>	Shoot		7.0	-0.43070360785655853	Fleisher, Z. and Fleisher, A. 1991. The Essential Oil of <i>Micromeria fruticosa</i> (L.) Druce subsp. <i>barbata</i> (Boiss et. Ky.), P.H. Davis. Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res 3: 477-479.
<i>Origanum minutiflorum</i>	Shoot	5.0	7.0	-0.43070360785655853	Baser, K.H.C., Tumen, G., Sezik, E. 1991. The Essential Oil of <i>Origanum minutiflorum</i> O. Schwarz and P.H. Davis. J. Ess. Oil Res. 3: 445-446.
<i>Teucrium polium</i>	Shoot		7.0	-0.43070360785655853	Perez-Alonso, M.J. Velasco-Negueruela, A. and Lopez-Saez, J.A. 1993. The Essential Oils of Two Iberian <i>Teucrium</i> Species. J. Ess. Oil Res. 5: 397-402.
<i>Peumus boldus</i>	Leaf	5.0	18.0	-0.4378138020796629	--
<i>Thymus capitatus</i>	Plant	60.0	190.0	-0.44874524105762253	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Teucrium gnaphalodes</i>	Shoot		5.0	-0.4667678822667873	Perez-Alonso, M.J. Velasco-Negueruela, A. and Lopez-Saez, J.A. 1993. The Essential Oils of Two Iberian <i>Teucrium</i> Species. J. Ess. Oil Res. 5: 397-402.
<i>Tagetes filifolia</i>	Shoot		4.7	-0.4721775234283216	--
<i>Salvia dorisiana</i>	Shoot	2.3	2.9	-0.5046353703975276	Tucker, A.O. & Maciarello, M.J. 1994. The Essential Oil of <i>Salvia dorisiana</i> Standley. J. Ess. Oil Res. 6: 97-8.
<i>Salvia gilliesii</i>	Shoot		2.5	-0.5118482252795733	Velasco-Negueruela, A. et al. 1993. The Essential Oil of <i>Salvia gilliesii</i> Benth. J. Ess. Oil Res. 5: 319-320.
<i>Elsholtzia pilosa</i>	Shoot		1.4	-0.5316835762051991	--
<i>Rosmarinus officinalis</i>	Shoot		1.0	-0.5388964310872448	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
<i>Acinos alpinus</i>	Shoot		1.0	-0.5388964310872448	Velasco-Negueruela,A., Perez-Alonso,M.J., Jiminez,S.M. and Garcia,F.M. 1993. The Volatile Constituents of <i>Acinus alpinus</i> (L.) Moench ssp. <i>meridionalis</i> (Nyman). P.W. Ball Growing in Spain. Flav. & Frag. J. 8:127-130.)

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Thymus mastichina</i>	Plant		40.0	-0.5403992550501685	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Origanum vulgare</i>	Plant	6.0	32.0	-0.545287469129771	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Monarda didyma</i>	Plant	2.0	20.0	-0.5526197902491747	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Lavandula latifolia</i>	Plant	1.0	19.0	-0.553230817009125	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Teucrium scorodonia</i>	Shoot		0.13	-0.5545843904556943	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Origanum onites</i>	Plant		16.0	-0.5550638972889759	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Eucalyptus punctata</i>	Shoot		0.1	-0.5551253545718478	Zriria, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven <i>Eucalyptus</i> Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus maculata</i>	Shoot		0.1	-0.5551253545718478	Zriria, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven <i>Eucalyptus</i> Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Hyssopus officinalis</i>	Shoot		0.1	-0.5551253545718478	Tsankova, E.T., Konatchiev, A.N. and Genova, E.M. 1993. Chemical Composition of the Essential Oils of Two <i>Hyssopus officinalis</i> cultivars. <i>J. Ess. Oil Res.</i> 5: 609-611.
<i>Eucalyptus albens</i>	Shoot		0.1	-0.5551253545718478	Zriria, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven <i>Eucalyptus</i> Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus maidenii</i>	Shoot		0.1	-0.5551253545718478	Zriria, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven <i>Eucalyptus</i> Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Thymus zygis</i>	Shoot		0.1	-0.5551253545718478	Jimenez, J., Navarro, M.C., Montilla, M.P., Martin, A. and Martinez, A. 1993. <i>Thymus zygis</i> Oil: Its Effects on CCl ₄ -Induced Hepatotoxicity and Free Radical Scavenger Activity. <i>JEO5</i> : 153-8.
<i>Eucalyptus siderophloia</i>	Shoot		0.1	-0.5551253545718478	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus melliodora</i>	Shoot		0.1	-0.5551253545718478	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Teucrium asiaticum</i>	Shoot		0.1	-0.5551253545718478	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Eucalyptus citriodora</i>	Shoot		0.1	-0.5551253545718478	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus occidentalis</i>	Shoot		0.1	-0.5551253545718478	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus astringens</i>	Shoot		0.1	-0.5551253545718478	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus globulus</i>	Shoot		0.1	-0.5551253545718478	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus blakelyi</i>	Shoot		0.1	-0.5551253545718478	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus botryoides	Shoot		0.1	-0.5551253545718478	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus bosistoana	Shoot		0.1	-0.5551253545718478	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus diversicolor	Shoot		0.1	-0.5551253545718478	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Teucrium oxylepis	Shoot		0.07	-0.5556663186880012	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Porophyllum ruderale	Plant		15.0	-0.5556749240489263	Loayza, I., de Groot, W., Lorenzo, D. et al. 1999. Composition of the essential oil of <i>Porophyllum ruderale</i> (Jacq.) Cass. from Bolivia. Flav. & Fragr. J. 14: 393-8.
Origanum syriacum	Shoot		0.0	-0.5569285682923593	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of <i>Origanum syriacum</i> L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Origanum syriacum	Shoot		0.0	-0.5569285682923593	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of <i>Origanum syriacum</i> L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Origanum syriacum	Shoot		0.0	-0.5569285682923593	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of <i>Origanum syriacum</i> L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Sideritis mugronensis	Leaf	4.0	6.0	-0.5580923191345154	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of <i>Sideritis mugronensis</i> Flower and Leaf. J. Ess. Oil Res., 3: 395-397.
Lepechinia calycina	Plant		10.0	-0.5587300578486778	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Citrus aurantiifolia	Fruit		40.0	-0.5594757607508909	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Laurus nobilis	Leaf		5.7	-0.5610992820608867	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cuminum cyminum	Fruit		24.0	-0.5742881361044722	--
Pimenta dioica	Fruit		14.0	-0.5835458707004604	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Citrus reticulata	Fruit	1.0	2.0	-0.5946551522156464	--
Citrus sinensis	Fruit	0.7	1.0	-0.5955809256752451	--
Vitex agnus-castus	Leaf		1.4	-0.604199084005542	Ekundayo, O., Laakso, I., Holopainen, M., Hiltunen, R., Oguntiemein, B., and Kauppinen, V. 1990. The Chemical Composition and Antimicrobial Activity of the Leaf Oil of Vitex agnus-castus L. J. Essential Oil Research, 2: 115-119.
Callicarpa americana	Leaf		1.0	-0.6082083679073705	--
Petroselinum crispum	Leaf		0.1	-0.6172292566864845	--
Elettaria cardamomum	Root Essent. Oil		11000.0	-0.638798325513007	--
Petroselinum crispum	Fruit Essent. Oil	1000.0	2600.0	-0.7283514630459411	--
Tanacetum parthenium	Fruit Essent. Oil		2000.0	-0.7397616687333448	--
Coleus barbatus	Root Essent. Oil		3000.0	-0.7732821835157451	Jim Duke's personal files.
Vitex agnus-castus	Leaf Essent. Oil		7900.0	-0.9602760805888906	Jim Duke's personal files.
Laurus nobilis	Flower		12.6	-0.9999999999999996	--
Boswellia serrata	Resin, Exudate, Sap		80000.0	-1.0	Sabinsa: A series of well documented proprietary PR booklets, e.g. Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
Petroselinum crispum	Seed Essent. Oil		7000.0	-1.0	--
Cuminum cyminum	Seed		24.0	-1.1767496731268863	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Rosmarinus officinalis	Shoot Essent. Oil		3500.0	-1.4107399372790863	--
Leonotis leonurus	Se		2.0		Pedro, L.G., Barroso, J.G., Marques, N.T., Ascensao, L., Pais, M.S.S. and Scheffer, J.J.C. 1991. Composition of the Essential Oil from Sepals of Leonotis leonurus R. Br. J. Ess. Oil Res. 3: 451-3

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Teucrium salviastrum</i>	Shoot				Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Hyssopus officinalis</i>	Shoot				Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) <i>J. Agric. Food Chem.</i> 42: 776-781.
<i>Carum carvi</i>	Seed				Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.
<i>Foeniculum vulgare</i>	Seed				Leung, A.Y., <i>Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics</i> , John Wiley & Sons, New York, 1980.
<i>Hyssopus officinalis</i>	Shoot				Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) <i>J. Agric. Food Chem.</i> 42: 776-781.
<i>Coriandrum sativum</i>	Fruit				Lawrence, B.M., <i>Essential Oils 1976-1977</i> , <i>Essential Oils 1978</i> , <i>Essential Oils 1979-1980</i> .
<i>Plectranthus amboinicus</i>	Plant				--
<i>Rosmarinus officinalis</i>	Leaf Essent. Oil				--
<i>Mentha arvensis</i> var. <i>piperascens</i>	Plant				List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Syzygium aromaticum</i>	Fruit				--
<i>Hyssopus officinalis</i>	Shoot				Tsankova, E.T., Konatchiev, A.N. and Genova, E.M. 1993. Chemical Composition of the Essential Oils of Two <i>Hyssopus officinalis</i> cultivars. <i>J. Ess. Oil Res.</i> 5: 609-611.
<i>Angelica archangelica</i>	Root Essent. Oil				--
<i>Laurus nobilis</i>	Bark		0.0		--
<i>Laurus nobilis</i>	Wood		0.0		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Anethum graveolens</i>	Essential Oil				--
<i>Piper auritum</i>	Leaf				Tramil
<i>Mentha spicata</i>	Essential Oil				--
<i>Vitex agnus-castus</i>	Flower				Jim Duke's personal files.
<i>Vitex agnus-castus</i>	Fruit				Jim Duke's personal files.
<i>Piper nigrum</i>	Fruit				--
<i>Croton eluteria</i>	Bark				--
<i>Pastinaca sativa</i>	Root				--
<i>Angelica archangelica</i>	Root	1.0	13.0		--
<i>Foeniculum vulgare</i>	Fruit				--
<i>Teucrium oxylepis</i>	Shoot				Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Mentha spicata</i>	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
<i>Abies alba</i>	Leaf				--
<i>Crocus sativus</i>	Silk Stigma Style				--
<i>Citrus limon</i>	Petiole		20.0		--
<i>Acinos alpinus</i>	Ah		1.0		Velasco-Negueruela,A., Perez-Alonso,M.J., Jiminez,S.M. and Garcia,F.M. 1993. The Volatile Constituents of <i>Acinus alpinus</i> (L.) Moench ssp. <i>meridionalis</i> (Nyman). P.W. Ball Growing in Spain. <i>Flav. & Frag. J.</i> 8:127-130.)
<i>Satureja obovata</i>	Leaf				Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of <i>Satureja obovata</i> . <i>Phytochemistry</i> 35(1): 83.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Satureja obovata</i>	Leaf				Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of <i>Satureja obovata</i> . <i>Phytochemistry</i> 35(1): 83.
<i>Citrus paradisi</i>	Pericarp		1.0		--
<i>Achillea millefolium</i>	Leaf				--
<i>Juniperus sabina</i>	Plant				--
<i>Pimpinella anisum</i>	Essential Oil				--
<i>Pinus sylvestris</i>	Leaf Essent. Oil				--
<i>Myristica fragrans</i>	Seed				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
<i>Teucrium pseudoscorodonia</i>	Shoot				Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Juniperus virginiana</i>	Leaf				--
<i>Capsicum annum</i>	Fruit				--
<i>Pimenta racemosa</i>	Plant				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Coriandrum sativum</i>	Essential Oil				--
<i>Ephedra sinica</i>	Shoot				--
<i>Laurus nobilis</i>	Leaf Essent. Oil				--
<i>Thymus orospedanus</i>	Plant				J. Nat. Prod.
<i>Croton lechleri</i>	Plant				Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
<i>Boswellia sacra</i>	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.